

L 14010-65

ACCESSION NR: AP4049098

emphasized. Selection of n-propyl alcohol as solvent for SiCl_4 and of 6.3 mol% SiCl_4 concentration was dictated by the fact that such a solution has maximum conductivity. Measurements were made with a Hungarian ON-101 polarograph with a dropping mercury cathode and a mercury anode. Standard Sb_2O_3 , BiCl_3 , and SnCl_2 solutions were used for preparation of the electrolytes. A linear relationship was established between the height of anodic peaks and concentration of metal ions in solution, the time of electrolysis, and the applied potential. Polarograms were plotted for each element separately and for the mixture of all three elements. The maximum sensitivities for determination of antimony, bismuth, and tin were 4×10^{-6} , 6×10^{-6} , and $3 \times 10^{-5}\%$, respectively. The concentration limits were determined for obtaining reproducible data with the mixtures of these elements. The problem of the complexing of the elements with chlorine ions was considered, and the reversibility of the oxidation-reduction process was established for bismuth and antimony. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnic Institute)

Card 2/3

L 14010-65

ACCESSION NR: AP4049098

SUBMITTED: 21Jan64

ENCL: 00

SUB CODE: GC, IC

NO REF SOV: 008

OTHER: 003

ATD PRESS: 3135

Card 3/3

СКОМЛЕНКО, А.А.; СКОМЛЕНКО, Е.А.

Polarography with accumulation on stationary electrodes (review).
Zav.lab. 30 no.3:261-267 '64. (MIRA 17:4)

1. Effect of the volume of a solution on the depth of anode dent

in amalgam polarography. Sov. lab. 30 no.5:525-527 '64.
(MIRA 17:5)

2. Tomskiy politekhnicheskii institut.

IGOLINSKIY, V.A.; STROMBENC, A.G.

Maximum sensitivity of the method of amalgam polarography
with storage. Zav. lab. 30 no.6:656-658 '64 (MIRA 17:3)

1. Tomskiy politekhnicheskii Institut. Imeni S.M. Kirova.

S/0076/64/038/001/0130/0135

ACCESSION NR: AP4011445

AUTHORS: Zakharov, M. S. (Tomsk); Stromberg, A. G. (Tomsk)

TITLE: Anode current constants and calculated amalgam polarography

SOURCE: Zhurnal fiz.khim, v. 38, no. 1, 1964, 130-135

TOPIC TAGS: anode current, amalgam polarography, dropping electrode
antimony polarography, cadmium polarography, thallium polarography,
copper polarography, lead polarography, gallium polarography, zinc
polarography, indium polarography, tin polarography

ABSTRACT: Since the diffusion current constant depends only on the nature of the ion and is constant for a given electrolyte and temperature, the aim of this study is to determine the corresponding amount (the anode tooth constant) for different elements and electrolytes by applying amalgam polarography with accumulation on a stationary mercury dropping electrode; the further purpose of the study was to find the applicability of the calculative method to the analysis by amalgam polarography. As a result of tests, a theoretical expression for the calculation of anode tooth constant has been

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ACCESSION NR: AP4011445

derived. For a number of electrolytes the anode tooth constants of zinc, thallium, tin, gallium, cadmium, lead, copper, bismuth, antimony and indium have been calculated; they agree with the experimental results. There is a definite relationship between the anode tooth constant and the diffusion coefficient of metal atoms in mercury, as well as the number of electrons participating in the electrode process. The anode tooth constant depends on the irreversibility of the anode process. Ori. art. has: 11 Formulas and 4 Tables.

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnical Institute) /

SUBMITTED: 06Mar63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: CH, PH

NR REF SOV: 008

OTHER: 001

2/2

Card

LYTHGREN, A.G.

Source: [illegible]

Polarographic determination of the composition of complexes directly
participating in the electrode process. Zhur. fiz. khim. 38 no.12:
2009-3001 D '64. (MIRA 18:2)

U.S.S.R. Academy of Sciences, Institute of Chemistry.

STROMBERG, A.G.; LEL'CHUK, Kh.A.

Kinetic study of the mechanism of nitration of aromatic compounds
by nitric acid. Izv. TPI 126;106-112 '64. (MIRA 18:7)

STROMBERG, A.I.; GORODOVYKH, V.Ye.; ZAKHAROV, M.S.

Method of amalgam polarography with storage. Part 1: Development of the theory. Trudy Kom. anal. khim. 15:141-149 '65.

Method of amalgam polarography with storage. Part 2: Quantitative theory, polarographic characteristics of the anodic current, apparatus and practical application of the method. Ibid.:150-163 (MIRA 18:7)

L 52281-65 EWT(m)/T/EWP(t)/ENP(b) JD

ACCESSION NR: AT5012676

UR/2513/65/015/000/0150/0163

AUTHOR: Stromberg, A.G.; Zakharov, M.S.; Gorodovikh, V.Ye.

TITLE: The method of amalgam polarography with accumulation. Part 2. Quantitative theory, polarographic characteristics of anodic current, apparatus, and practical application of the method

SOURCE: AN SSSR. Komissiya po analiticheskoy khimii. Trudy, v. 15, 1965. Metody kontsentrirvaniya veshchestv v analiticheskoy khimii (Methods of concentrating substances in analytical chemistry), 150-163

TOPIC TAGS: amalgam polarography, accumulation polarography, semiconductor analysis, dropping mercury electrode, anode peak potential

ABSTRACT: The authors developed a method of calculation for amalgam polarography with accumulation (APA) involving the use of a stationary dropping mercury electrode, and calculated the anodic peak constant for elements in various electrolytes. Experimental data showed that this constant is inversely proportional to the width of the half-peak. The potentials of the anodic peaks were determined in various electrolytes for Cu(II), Pb, In, Zn, Tl(I), Sb(III), Ge, Ca, Sn(IV), Bi, and Cd. The use of differential

Card 1/2

L 52281-65

ACCESSION NR: AT5012676

amalgam polarography for the purpose of increasing the accuracy and reliability of the APA method is described together with the apparatus employed. A theoretical study established that the APA method can be used for determining concentrations as low as 10^{-11} M. A brief review of the reported amalgam polarographic techniques used in the determination of ultramicroconcentrations of elements in semiconducting materials is given. Orig. art. has: 5 figures, 1 table, and 15 formulas.

ASSOCIATION: Komissiya po analiticheskoy khimii, AN SSSR (Commission on Analytical Chemistry, AN SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: IC , 00

NO REF SOV: 026

OTHER: 000

gal
Card 2/2

... ..

... of the contact diameter and size of a hanging mercury
... the active surface in the method of amalgam polarography
... storage. Elektrokhimia 1 no.7:851-853 J1 '65.
(RUSS 18:10)

... . Fizicheskii i khimicheskii institut imeni Eil'eva.

STROMBERG, A.G.; ZAKHAROV, V.A.

Diffusion coefficients of metals in mercury. Part 12. New method for determining diffusion coefficients from the decay with time of the anodic limiting current on a hanging mercury drop. Elektrokhimiya 19:9:1016-1023 1963 5 16% (MIRA 18:10)

1. Tomskiy politekhnicheskii institut i Tomskiy gosudarstvennyy universitet.

STROMBERG, A.G.; KARTUSHINSKAYA, A.I.

Polarographic study of the mixed potential in a solution of two
oxidation-reduction systems. Elektrokhimiya 1 no.10:1291-1294
0 '65. (MIRA 18:10)

1. Tomskiy politekhnicheskii institut imeni Kirova.

SPIRIN, B.K.; STROMBERG, A.G.

Effect of various factors on the anodic peak of uranium in
the method of amalgam polarography with storage. Zhur. anal.
khim. 20 no.7:807-810 '65. (MIRA 18:9)

1. Tomsk Polytechnical Institute.

L 1438-66 EWT(m)/EPF(c)/T/EWP(t)/EWP(b) IJP(c) JD/WB

ACCESSION NR: AP5023709

UR/0075/65/020/008/0769/0774
543.253

AUTHOR: Karbainov, Yu. A.; Stromberg, A. G. ^{44,55}

TITLE: Raising the sensitivity of the method of amalgam polarography with accumulation by increasing the surface of mercury ammonium amalgam at high temperature in nonaqueous solutions ^{27 27 19}

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 8, 1965, 769-774

TOPIC TAGS: polarography, mercury, electrode

ABSTRACT: It is shown that the sensitivity of the method of amalgam polarography with accumulation can be increased by a factor of 10 to 15 if the preliminary accumulation of the metal in the mercury drop is carried out in the vicinity of the boiling point of the solution used as the supporting electrolyte. The sensitivity is raised because the ammonium ion present in the supporting electrolyte is reduced at the mercury drop, forming an ammonium amalgam whose surface area is much greater than that of the original drop. The increase in sensitivity due to the increased diffusivity of the metal ions cannot be more than threefold; the main increase is

Card 1/2

L 1438-66

ACCESSION NR: AP5023709

due, however, to a sharp increase (14-15-fold) in the electrolysis constant, caused by the vigorous stirring of the solution during electrolysis. The joint influence of these two factors in nonaqueous (alcohol) solutions is examined in detail. Orig. art. has: 4 figures, 3 tables.

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnic Institute)

SUBMITTED: 06Jul64

ENCL: 00

SUB CODE: GC

NO REF SOV: 002

OTHER: 000

Card 2/2

L 14691-66 EWT(m)/T

ACC NR: AP6005876

(A)

SOURCE CODE: UR/0075/65/020/010/1043/1047

24
B

AUTHOR: Stromberg, A. G.; Kaplin, A. A.

ORG: Tomsk Polytechnic Institute (Tomskiy politekhnicheskiy institut)

TITLE: Effect of electrode surface and solution volume on the sensitivity of the method of amalgam polarography with accumulation

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 10, 1965, 1043-1047

TOPIC TAGS: polarographic analysis, ~~trace analysis~~, chemical purity, electrode, mercury alloy

ABSTRACT: The article examines the possibility of increasing the sensitivity of the method of amalgam polarography with accumulation by decreasing the volume of the solution. The following expressions are derived:

$$a_s = 3.8i_s$$

$$V_s = 2.2 \cdot 10^4 i_s$$

$$\frac{S_s}{V_s} = 0.032$$

Card 1/2

L 14691-66

ACC NR: AP600587C

where α_* is the impurity content of a high-purity material (in wt %), i_* is the maximum sensitivity of the polarograph, V_* is the optimum volume of the solution, and S_* is the optimum surface of the mercury electrode. It is thus shown that when standard recording polarographs with a sensitivity of 10^{-9} - 10^{-10} A/mm are used, one can determine 10^{-9} - 10^{-10} % impurities in high-purity substances if the volume of the solution, surface of the electrode, and certain other conditions are suitably chosen. Deviation from these optimum values causes a decrease in the sensitivity of the method. Orig. art. has: 1 table, 21 formulas.

SUB CODE: 0709/ SUBM DATE: 03Aug65/ ORIG REF: 003/ OTH REF: 000

BYK

Card 2/2

CHIRIKOVA, L. G.

... for amalgam polarography with storage under
standard conditions. Zhur. anal. khim. 20 no.12:1279-
1282 1965.

(MIRA 18:12)

L. Tomskiy politekhnicheskii Institut imeni S.M. Kirova.
Submitted March 27, 1964.

L 3580-66 EWT(m)/T
ACCESSION NR: AP5024809

UR/0032/65/031/010/1175/1177
543.253

4453
AUTHOR: Stromberg, A. G.

7.44.56
26
23
D
TITLE: Use of the cumulative amalgam polarography method for determining impurities of 10^{-10} to 10^{-12} g
18

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1175-1177

TOPIC TAGS: polarographic analysis, electronic measurement, electrochemical analysis

ABSTRACT: It is shown by theoretical calculations that the sensitivity of the cumulative amalgam polarography method can be improved for the determination of impurities of the order of 10^{-10} to 10^{-12} wt. % and less. The limit of sensitivity for this method is determined by the sensitivity of the polarograph and the electrolysis constant $K_1 = i_e / SC_1 \cdot 10^3$, where i_e is the current used in electrolysis, C_1 is the ion concentration in the solution at the given moment of electrolysis in g-ions/l⁻¹, S is the area of the electrode surface and K_1 is expressed in a·cm-ions⁻¹. The sensitivity of the instrument can apparently be increased to 10^{-12} to 10^{-14} a/mm by

Card 1/2

L 3504-36

ACCESSION NR: AP5024809

3

modern electronic techniques. Thus the chief limitation to sensitivity improvement in the method lies in the possibility for increasing K_1 and eliminating the effect of capacitive current. For ordinary operation with 3-5 ml cells and strong nitrogen agitation of the solution, the electrolysis constant is equal to 800-1000. The electrolysis constant can be increased by intensifying agitation, rapid rotation of the electrode, electrode vibration or vibration of the entire cell at sonic or supersonic frequencies, etc. As this paper was being sent to press, special experiments had already confirmed the possibility of increasing K_1 by one or two orders of magnitude. The density of the residual current can be increased by careful purification of the solution from oxygen and other impurities and reducing the current density to the value of the capacitive current, and also by reducing the effect of the capacitive current through the use of differential polarography or various electronic methods for cutoff of the capacitive current. Thus a small change in the conditions for conducting the analysis can increase the sensitivity of the method by three orders of magnitude, while stronger agitation and reduction of capacitive current effects may even increase the sensitivity by five or six orders of magnitude and perhaps more. Orig. art. has: 12 formulas, 1 table. 4455

ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk Polytechnical Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: SS, OP

NO REF SOV: 003

OTHER: 000

Card 2/2

STROMBERG, A.I.; SHIKHAREV, Yu.N.

Removal of oxygen from polarographic solutions. Zav. lab. 31
no.10:1185-1187 '65. (MIRA 19:1)

1. Tomskiy politekhnicheskii institut.

S/032/61/027/001/001/037
B017/B054

AUTHORS: Stromberg, A. G. and Stromberg, E. A.

TITLE: Determination of Ultramicroconcentrations in Solutions by
the Method of Amalgam Polarography on a Stationary Mercury
Drop (Survey)

PERIODICAL: Zavodskaya laboratoriya, 1961, Vol. 27, No. 1, pp. 3-10

TEXT: The authors thoroughly discuss the method of amalgam polarography with a stationary mercury drop at a continuously changing potential for the determination of ultramicroconcentrations. The principle of the method is as follows: The sample of 10^{-7} - 10^{-9} g is electrolyzed for a certain time on a stationary Hg drop at a controlled potential. The element to be investigated is enriched as amalgam on the surface layer of the drop. Then follows anodic dissolution at a continuous potential increase from the value at which the element was separated on the Hg cathode to more positive values. The current forming in the oxidation of the amalgam is recorded. Various types of stationary mercury electrodes are discussed on the basis of published data. The authors also discuss the effect of

Card 1/3

Determination of Ultramicroconcentrations in S/032/61/027/001/001/037
Solutions by the Method of Amalgam Polarography B017/B054
on a Stationary Mercury Drop (Survey)

working conditions of the preliminary electrolysis on the height of the anodic peak, e.g. time of electrolysis, mixing of the sample, change in concentration of metals in the solution, surface area of the mercury electrode. They give Ševčík's equation (Ref. 32) for the height of peak:

$$I_{\max} = 217 S z^{3/2} v^{1/2} D^{1/2} C,$$

where I = height of peak in amperes, S = electrode area in cm^2 , z = number of electrons participating in the electrode process, v = rate of potential change (v/sec), C = molar concentration (moles/l), D = diffusion coefficient (cm^2/sec), 217 = coefficient. The equation shows that the height of peak changes proportionally to the square root of the rate of potential change. Amalgam polarography with a stationary mercury drop at a continuously changing potential permits a 100-1,000 fold increase in sensitivity when determining microamounts, and will be widely used in chemical laboratories and scientific research institutes. The method is particularly convenient to determine ultramicroimpurities (10^{-6} - $10^{-7}\%$) in high-purity materials. The authors do not refer to their own papers in this survey. There are 2

Card 2/3

Determination of Ultramicroconcentrations in S/032/61/027/001/001/037
Solutions by the Method of Amalgam Polarography B017/B054
on a Stationary Mercury Drop (Survey)

figures, 1 table, and 51 references: 18 Soviet, 25 US, 2 British, 2
Czechoslovakian, and 3 Polish.

✓
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Card 3/3

05853

SOV/78-4-11-6/50

5(2)

AUTHORS:

Kalinichenko, I. I., Nikitin, V. D., Stromberg, M. R.,
Kir'yanova, T. M., Kotyayeva, K. A.

TITLE:

The Dissolution of Nickel in Nitric Acid

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11,
pp 2443-2448 (USSR)

ABSTRACT:

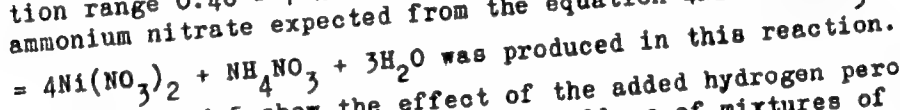
The authors investigated the influence exerted by temperature, acid concentration and additions upon nickel dissolution and the composition of decomposition products of nitric acid. Experiments were made at 60, 80, and 100°C. Figures 1-3 and table 1 indicate the dissolution rate of Ni in 0.42 n - 12 n solution of HNO₃. Temperature rise accelerates the dissolution. At constant temperature and increasing acid concentration, the dissolution rate rises up to a certain acid concentration, and is then reduced again at higher acid concentrations due to passivation. For 60°C, the dissolution rate has a maximum at an acid concentration of 6.5 - 7 n, for 80°C it is found at 8.5 - 9 n, and for 100°C at concentrations of above 9.0 n. Passage of oxygen had no effect within the temperatures and concentrations ap-

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05853
SOV/78-4-11-6/50

The Dissolution of Nickel in Nitric Acid

plied. Analysis of nitric acid on ammonium nitrate has shown that the quantity of the resultant NH_4NO_3 was almost independent of temperature and remained fairly constant within the concentration range 0.46 - 7 n of nitric acid. About 90% of the amount of ammonium nitrate expected from the equation $4\text{Ni} + 10\text{HNO}_3 =$



Figures 4 and 5 show the effect of the added hydrogen peroxide, ferrinitrate and nickel nitrate as well as of mixtures of these three compounds. Addition of H_2O_2 accelerates nickel dissolution by 2 - 2.5 times, while the formation of NH_4 salts is reduced to one-third at 40°C and to 16% approximately at 100°C . $\text{Fe}(\text{NO}_3)_3$ accelerates the dissolution of Ni only above 60°C , whereas $\text{Ni}(\text{NO}_3)_2$ diminishes the dissolution rate to one-half

between 40 and 60°C . At higher temperatures its effect decreases. $\text{H}_2\text{O}_2 + \text{Fe}(\text{NO}_3)_3$ and $\text{H}_2\text{O}_2 + \text{Ni}(\text{NO}_3)_2$ increase the dissolution rate of Ni up to 60°C . At higher temperatures, rapid catalytic decomposition of H_2O_2 takes place so that only the after-men-

Card 2/3

NIKITIN, V.D.; KALINICHENKO, I.I.; TSYFANOVA, R.I.; STROMBERG, M.R.

Evaluation of reducing agents in the preparation of nitrates and
sulfates of the chromium oxide from chromium anhydride. Trudy
Ural. politekh. inst. no.94:84-89 '60. (MIRA 15:6)
(Nitrates) (Sulfates) (Chromium compounds)

57. 1/1
USER/ Electronics - Television equipment

Card 1/1 Pub. 89 - 21/30

Authors : Stromberg, R.

Title : ~~Television in the people's economy~~
Television in the people's economy

Periodical : Radio 3, 45 - 47, Mar 1955

Abstract : A number of ways in which television can be used for practical purposes are pointed out, such as in industry, transportation and merchandising. Special systems for connecting up receiving sets by coaxial cables with cameras are described, along with particulars as to the design and construction of this equipment. Emphasis is laid on the merits of a tube called the "Vidikon." Illustrations.

Institution :

Submitted :

WIERILTIENNIKOW, Aleksy; STROMENGA, Zuzanna [translator]

All organs in living bodies are subject to renovation.
Problemy 19 [i.e. 20] no. 2:117 '64.

MULLER, Ludwik; STROMICH, Marian;

Electrodynamic model of gear transmission. Problemy proj hut
maszyn 11 no.7:217-221 J1 '63.

1. Politechnika Slaska, Gliwice.

TO: KRYWICKI, L., STANLEY, T., SCHANDRI, J.

2. Qualitative characteristics of the ... air oxidation of
... and ...
...

KOWALSKA, Euzenia, doc. mgr inż.; GUBRYNOWICZ, Lesław, mgr inż.;
STRÓMICH, Teresa, mgr inż.

variations in the bulk of coal in the low-temperature acidation
process of certain types of coal mined in Poland. Przegl gorn 20
no.4:205-209 Ap '64.

TRUKHAN, P.T.; POPOVA, A.A.; Prinimali uchastiye: LOMBROVSKAYA, A.R.;
GROSMAN, Z.M.; STROMILO, L.I.; SEGAL', E.M.

Globulin immunization of schoolchildren to prevent infectious
hepatitis. Report no.1: Reactions following the introduction
of gamma glcbulin. Zhur. mikrobiol., epid. i immun. 41 no.10:
143-144 '64. (MIRA 18:5)

1. Kiyevskiy institut usovershstvovaniya vrachey i Sanitarno-
epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva.

GAUKHMAN, L.A.; STOLKHOV, N.N.

Attracting State publishers to publish reference and information
works for research, design, and construction organizations and
enterprises of the country. NTI no. 7:5-7 '65.

(MIRA 18:6)

STROMILOV, V. K., kandidat tekhnicheskikh nauk.

Approximate method for solving the characteristic eq.
sideslipping motion of airplanes. Trudy MAI No. 75:5-11 '57.
(Aeronautics) (MLRA 10:6)
(Differential equations)

1
STROMILOV, V M.

PHASE I BOOK EXPLOITATION SOV/3319

1)

Kolosov, Sergey Petrovich, and Vasilii Mikhaylovich Stromilov

Osnovy avtomaticheskogo pilotirovaniya (Fundamentals of Automatic Piloting) Moscow, Oborongiz, 1959. 232 p. Errata slip inserted. 5,500 copies printed.

Sponsoring Agency: Moskovskiy aviatsionnyy institut imeni Sergo Ordzhonikidze.

Ed.: G.F. Polyakov, Engineer; Managing Ed.: A.S. Zaymovskaya, Engineer; Ed. of Publishing House: A.G. Kuznetsova; Tech. Ed.: V.P. Rozhin.

PURPOSE: The book is intended for students at the MAI [Moscow Aviation Institute] and for engineers and scientists interested in the automatic piloting of aircraft.

COVERAGE: The book outlines the theory of automatic piloting and describes the working principles and elements going into the construction of autopilots. The equations for maintaining

Card 1/6

Fundamentals of Automatic (Cont.)

SOV/3319

course and altitude stability (equilibrium) are derived, analyzed, and evaluated. The linear theory of automatic control presented in this book is Soviet. The authors acknowledge the assistance of B.N. Petrov, Corresponding Member of the Academy of Sciences, USSR; A.A. Lebedev, Professor, Doctor of Technical Sciences; B.A. Ryabov, Professor, Doctor of Technical Sciences; and F.A. Mikhaylov, Docent, Candidate of Technical Sciences. Some material contained in this book was provided by V.I. Zaytsev, Docent, Candidate of Technical Sciences. There are numerous tables, diagrams, and 9 Soviet references.

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STRICTLY CONFIDENTIAL

28(1) SOKOLOV, N I PHASE I BOOK EXPLOITATION SOV/2309
 Agevain, Dmitry Ivanovich, Mikhail Aleksandrovich Balashov, Sergey Petrovich Kolosov, Valentin Ivanovich Medvedev, Yevgeniy Mikhailovich Neshetnikov, Nikolay Ivanovich Sokolov, Vasily Mikhailovich Stralov, Nikolay Mikhailovich Tishchenko, and Nikolay Petrovich Udalov
 Rukovodstvo po projektirovaniyu elementov i sistem avtomatiki; posobie po kursovom projektirovaniyu (Handbook on the Design of Automatic Control Elements and Systems; Textbook for Term Projects in Design) No. 2. Moscow, Oborongiz, 1959. 247 p. (Series: Moscow. Aviat-sionnyy Institut im. Sergo Ordzhonikidze) Errata slip inserted. 17,500 copies printed.

Ed. (Title page): B.N. Petrov, Corresponding Member, USSR Academy of Sciences, Professor; Ed. (Inside cover): V.N. Istratov, Candidate of Technical Sciences; Ed. of Publishing House: E.A. Shebtkin; Tech. Ed.: V.F. Rozhin; Managing Ed.: A.S. Zaymovakaya.
 PURPOSE: This is a textbook for students of the electromechanical departments of VTuzes working on term- and diploma design projects.

Card 1/4
 Some chapters may also be useful to engineering personnel working with automatic control systems.

COVERAGE: The authors discuss basic problems in the design of automatic control systems elements, such as transducers, relays, clutches and power transformers. They also describe servo systems, particularly autopilots, and present numerical examples of calculating system parameters. Typical assignments for students working on term design projects are also presented. The book was written by part of the teaching staff of Moscow Aviation Institute imeni Sergo Ordzhonikidze, under the direction of Professor B.N. Petrov, Corresponding Member, USSR Academy of Sciences. Chapter I was written by D.I. Agevkin; Chapter II, by S.P. Kolosov and N. A. Balashov; Chapter III, by V.I. Medvedev; Chapter IV, by Ye. M. Neshetnikov; Chapter V, by N.P. Udalov; Chapter VII, by N. M. Tishchenko; Chapter VIII, by N. I. Sokolov; and Chapter IX, by V. M. Stralov. The authors thank Doctors V.N. Istratov, S.F. Rozhin, and A. P. Knodkov, Candidates of Technical Sciences, for reviewing the book. There are 69 references, all Soviet (including 2 translations).

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Ch. I. Acceleration and Vibration Transducers	27
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Appendices.

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AVAILABLE: Library of Congress

Card 1/4
 JP/2g
 9-30-59

BALASHOV, M.A.; VORONKOV, B.S.; YELAGIN, Ye.B.; KISELEV, L.N.; KOLOSOV, S.P.; LEONT'YEVA, V.P.; NEFEDOVA, V.I.; STRONILLOV, V.M.; SOKOLOV, N.I.; TISHCHENKO, N.M.; UDALOV, N.P.; PETROV, B.N., akademik, red.; GRIGORASH, K.I., red. izd-va; ROZHIN, V.P., tekhn. red.

[Handbook on the design of components and systems of automatic control; a manual for the preparation of course and diploma projects] Rukovodstvo po proektirovaniu elementov i sistem avtomatiki; posobie po kursovomu i diplomnomu proektirovaniu [By] M.A.Balashov i dr. Pod red. B.N.Petrova. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz. No.4. 1961. 311 p.
(MIRA 15:3)

1. Moscow. Aviatsonnyy institut imeni Sergo Ordzhonikidze.
(Automatic control) (Electronics)

3.2000
10 1240
26.2.1961
AUTHORS

TITLE

SOURCE

TEXT

33192
S/535/61/000/139/004/009
E140/E435
Mikhaylov, F.A., Candidate of Technical Sciences,
Stromilov, V.M., Candidate of Technical Sciences
On the dynamic precision of automatic longitudinal
stabilization of a winged flying apparatus in a
perturbed atmosphere
Moscow. Aviatsionnyy institut. Trudy, no.139. 1961.
Voprosy avtomaticheskogo regulirovaniya
dvizhushchikhsya ob"yektov. 87-107
The authors attempt to give a quantitative criterion of
the dynamic precision of stabilization of a flying apparatus for
longitudinal motion of the apparatus. The questions of stability
are not considered and it is assumed that the system is stable.
The author first derives the equations of motion of an aircraft in
perturbed atmosphere from the equations in the undisturbed
atmosphere. These equations are then linearized by means of
Taylor series expansions limited to the first terms. The
assumption is made that in horizontal flight the mean value of the
vertical component of the wind is equal to zero while the mean
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E140/E435

On the dynamic precision of automatic ... The value of the horizontal component is non-vanishing. linearized equations are then reduced to dimensionless form. Using the Laplace transform with zero initial conditions the transfer functions with respect to wind perturbations of a flying apparatus without automatic control are found. The author then passes to consideration of the same system with automatic flight stabilization. Ideal dynamic stabilization is defined for the case where the flight trajectory is a horizontal straight line and there are no angular oscillations of the apparatus. This reduces to two conditions: rectilinear motion of the centre of gravity and absence of angular oscillations about the centre of gravity. By a verbal argument the authors show that these two conditions are inconsistent and ideal stabilization in a perturbed atmosphere even in the case of absence of a vertical wind component, cannot be realized. In principle, it would be possible to build a stabilizer which would realize ideal stabilization under fixed flying regime. However such servomechanisms would be very complicated and would have to be readjusted for each change of regime. Therefore real flight stabilizers are built on simpler

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On the dynamic precision of automatic ... E140/E435

principles, general to the majority of automatic controls. The authors derive the transfer functions of an aircraft equipped with auto-pilot for both horizontal and vertical wind components. In estimating the precision of longitudinal stabilization under random wind conditions the initial conditions are neglected, since their effect diminishes with time and becomes negligible compared with the duration of a real flight. Considering the wind velocity distribution in time as a stationary random process, the criterion of stabilization precision is given in terms of the mean-square deviation of the pitch angle

$$(\Delta \varphi)_{C.K} = \sqrt{\frac{1}{\pi} \int_0^{\infty} |W_{\varphi B}(j\omega)|^2 S_{\varphi B}(\omega) d\omega} \quad (36)$$

where $W_{\varphi B}(s)$ is the transfer function of the system and $S_{\varphi B}(\omega)$ is the spectral density of the stationary process. It is clearly desirable to design an auto-pilot to minimize Eq (36). Unfortunately, since this is a function of statistical

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On the dynamic precision of automatic processes independent of the aircraft, which vary over wide limits this can only be done by broadening the criterion to the point where it becomes independent of the external perturbations. Such a condition is given by

$$\int_0^{\infty} \|W_{\Phi B}(j\omega)\|^2 d\omega = \min \quad (44)$$

The quantity

$$\varepsilon = \frac{1}{\pi} \int_0^{\infty} \|W_{\Phi B}(j\omega)\|^2 d\omega \quad (45)$$

has been termed the degree of mobility of the system. The authors then present a method for calculating the degree of mobility in terms of the system parameters and coefficients. There are 1 figure and 4 Soviet-bloc references.

Card 4/4

X

STROMINGER, D.

Dimensioning air distributors with constant air-pressing speed. p. 256.

(INDUSTRIA TEXTILA. Vol. 8, No. 6, June 1957, Bucuresti, Rumania)

SO: Monthly List of East European Accessions (FEAL) Lc. Vol. 6, No. 10, October 1957. Uncl.

STROMINGER, D.

Air screens at entrances of industrial halls. p. 61.
(METALURGIA SI CONSTRUCTIA DE MASINI. Vol. 9, no. 3, Mar. 1957, Rumansia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957
Uncl.

STROMM, N.G., nauchnyy sotrudnik

Protection of corn seed and seedlings against mold. Zashch.
rast. ot vred. i bol. 9 no.7:18-19 '64. (MIRA 18.2)

GALKINA, N.B.; GINPOVT, Ye.A.; STROMM, N.G.

Biological characteristics of the seeds of Uzbek tau-saghyz
(Scorzonera uzbekistanica C.Czevr. et O.Bond.). Trudy Inst.bot.
AN Uz.SSR.no.3:195-199 '55. (MIRA 10:1)
(Uzbekistan--Tau-saghyz) (Germination)

USPENSKIY, F.M., kand. biol. nauk; SOMOV, I.A.; MUMINOV, A.M.,
kand. sel'khoz. nauk; IVANOV, Ye.N., kand. biol. nauk;
VASIL'YEV, A.A., kand. sel'khoz. nauk; SOLOV'YEVA, A.I.,
kand. sel'khoz. nauk; ZAPROMETOV, N.G., doktor sel'khoz.
nauk; YAKHONTOV, V.V., doktor biol. nauk; KAPUSTINA, R.I.;
STROMM, N.G.; POLEVSHCHIKOVA, V.N., kand. sel'khoz. nauk;
KARIMOV, M.A., doktor biol. nauk; NOSKOV, I.G., kand. sel'-
khoz. nauk; KHODZHAYEV, A.Kh.; ALEYEV, B.G., kand. sel'khoz.
nauk; YAKHONTOV, V.V., doktor biol. nauk; STEPANOV, F.A.;
LYUBETSKIY, Kh.Z., kand. med. nauk; GUREVICH, B.E.;
KONDRAT'YEV, V.I.; SUDARS, L.P.; KOSTENKO, I.R., zasl. agr.
Uzbekskoy SSR; GORELIK, I.M., red.; BAKHTIYAROV, A., tekhn.
red.

[Manual on controlling the pests, diseases and weeds of cot-
ton, corn, and legumes] Spravochnik po bor'be s vreditel'ny
i bolezniami khlopchatnika, kukuruzy i bobovykh kul'tur. Izd.2.,
perer. i dop. Tashkent, Gos.izd-vo UzSSE, 1963. 325 p.

(MIRA 16:5)

(Field crops—Diseases and pests)
(Weed control)

STROMMER, J. (Budapest)

A simple example for the independence of the Hilbert axiom III 5.
In German. Acta mat. Hung. 10 no. 3/4:395-396 '59. (EBAI 9:5)
(Geometry)

STROMMER, J. (Budapest)

An elementary proof of the circle axiom of hyperbolic geometry.
Acta math Szeged 22 no.3/4:190-195 '61.

1. Submitted May 20, 1960.

SOKOLOV, A.; TALAYEVA, M.; MITIN, P.; MIROPOL'SKIY, I.; OCHKIN, V.;
GOL'FMAN, B.; STROMOV, V.; BORISOV, V.

Exchange of practices. Mias. ind. SSSR 33 no.4:33-40 '62.
(MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy
promyshlennosti (for Sokolov, Talayeva, Ochkin). 2. Gomel'-
skiy myasokombinat (for Mitin, Miropol'skiy). 3. Brestskiy
myasotrest (for Gol'fman). 4. Kislovodskiy myasokombinat
(for Stromov). 5. Rizhskiy zavod "Kompessor" (for Borisov).

ACC NR: AP6021587

(N)

SOURCE CODE: UR/0402/66/000/003/0372/0373

AUTHOR: Sergiyev, P. G.; Shamprayeva, S. A.; Ryazantseva, N. Ye.; Chelysheva, G. N.;
Goryacheva, B. A.; Stromova, G. N.

Moscow
ORG: Cortex Study Group, [Director—Active Member, Academy of Medical Sciences USSR,
Prof. P. G. Sergiyev] (Gruppa po izucheniyu kori)

TITLE: Culturing viruses in primate tissue

SOURCE: Voprosy virusologii, no. 3, 1966, 372-373

TOPIC TAGS: virology, pathogen, virus, tissue culture, primate, *HISTOLOGY, VIRUS,*
CYTOLOGY

ABSTRACT:

Viruses isolated from the blood of infected monkeys were grown in primate spleen and kidney tissue for 10—12 passages. Typical cytopathic changes were observed as well as changes in properties of the viruses themselves. When cultured in spleen cells, the virus lost less of its virulence than when cultured in kidney cells. Vaccines made from these preparations had some protective effect which vanished within a year. [W.A. 50, CBE No. 10]

SUB CODE: 06/ SUBM DATE: none/

Card 1/1

L 38-479-66 EWI(m)/EWA(d)/EWP(t)/ETI LJP(c) JD/JG
ACC NR: AP6010137

SOURCE CODE: UR/0133/66/000/003/0253/0257 54

AUTHOR: Sidel'kovskiy, M. P. (Candidate of technical sciences); Tyurin, Ye. I. (Candidate of technical sciences); Danilin, V. I. (Candidate of technical sciences); Frantsuzov, S. N. (Engineer); Sinolit'skiy, K. A. (Engineer); Stromova, R. P. (Engineer); Antipova, K. I. (Engineer); Selivanov, V. M. (Engineer); Petrov, B. S. (Engineer)

ORG: Volgograd Scientific Research Institute of Machine Building Technology (Vologradskiy n.-i. institut tekhnologii mashinostroyeniya); Krasnyy Oktyabr' Plant

TITLE: Effect of treatment with minute amounts of boron on the properties of Kh23N18 chromium-nickel steel 16 21

SOURCE: Stal', no. 3, 1966, 253-257

TOPIC TAGS: stainless steel, boron, chromium steel, nickel steel, metal melting, weldability, metal scaling / Kh23N18 Cr-Ni stainless steel

ABSTRACT: This effect was investigated for 12 laboratory melts and 45 industrial melts of Kh23N18 stainless heat-resistant chromium-nickel steel (0.08-0.13% C, 1.44-1.82% Mn, 0.20-0.47% Si, 22.05-24.30% Cr, 18.48-19.24% Ni, 0.013-0.033% P, 0.006-0.020% S). (The industrial melts contained 0.18-0.29% Cu.) Boron was added to the laboratory melts in the form of 28% ferroboron prior to tapping, and to the industrial

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UDC: 66.046.51+546.27:669.15 — 194.669.24'25

L 28479-66

ACC NR: AP6010137

melts in the form of 10% ferrobore while filling the bottom one-third of the ladle, in proportions of 0.0047-0.0015%. Specimens taken from the ingots, after their hot and cold working, were subjected to microstructural examination and X-ray diffraction analysis. Findings: "microtreatment" with boron affects the structure and phase composition of stainless steels of the Kh23N18 type. At ~1150°C the segregation of a boride phase, clearly visible under an optical microscope, is observed. In the temperature range 1050-1200°C and particularly at 1100-1150°C, treatment with minute amounts of B markedly enhances the plasticity of Kh23N18 steel thus reducing its susceptibility to external defects when rolled in a blooming mill. Under optimal conditions of final deoxidation (with 0.4-0.8 kg of Al per ton) prior to addition of boron, the percentage of defect-free slabs markedly increases and the labor requirement of finishing operations decreases; at the same time, savings of Ni are achieved. (To enhance the effectiveness of treatment with boron, final deoxidation with Al is required, since Al prevents the fixation of B by nitrogen and thus increases the degree of the assimilation of B.) If the B content is 0.003% and more, Kh23N18 steel becomes more prone to cracking during argon-arc welding whereas if the B content is 0.0015% and Al is used as the deoxidant, the weldability of this steel is as good as that of its boron-free counterpart. The addition of B within the limits investigated (up to 0.0047% inclusively) increases the resistance of Kh23N18 steel to scaling at 1000°C and when the B concentrations reach approximately 0.003-0.004%, also at 1100°C. Orig. art. has: 4 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002

Card 2/2 10

VOSTAL, Z.; STROMP, L.

Simple sedimentation method for entomological examination of
insecticide contact dusts. Cesk. epidem. mikrob. imun. 8 no.4:
273-276 July 59

1. Krajska hygienicko-epidemiologicka stanice v Kolicich.
(INSECTICIDES, pharmacol.)

GYERGYAY, E., Assist. Prof.; FODOR, F.; ANTALFFY, A.; STROMPEL, E.

Contributions to the morphology of the diabetes insipidus syndrome.
Rumanian M. Rev. 4 no.1:3-6 Ja-Mr '60.
(DIABETES INSIPIDUS etiol.)
(PITUITARY GLAND dis.)

MISKOLCZY, Dezso; CSIKY, Kalman; TOROK, Ferenc; STROMPEL, Ilona

Surgery of the so-called a frigore paralysis of the face. Ideg. szemle
10 no.5-6:189-194 Oct-Dec 57.

1. A Marosvasarhelyi Orvostudományi és Gyógyszertészeti Felsőoktatási
Intézet Ideg- és elmegyógyászati klinikájának (igazgató: Miskolczy Dezso)
és Ful-orr-gegyógyászati klinika jának (igazgató: Vendeg Vince)
közlönye.

(FACIAL PARALYSIS, surg.
in paralysis due to exposure to cold (Hun))

(COLD, inj. eff.
facial paralysis, surg. (Hun))

STROMPL, Aladar

Reduction of zinc plating costs through increasing the durability of sherardizing tubs. Gepgyartastechn 2 no.2: 59-61 F '62.

1. Csepel Vas- es Femmuvek.

STROFL, A. A. 1964

Theoretical and practical aspects of the profile development
of finger rolls. Kch lap 97 no. 11:504-509 N '64

I 64384-65

ACCESSION NR: AP5019484

UR/0329/65/000/007/0009/0010

661.728:678.542.32

AUTHOR: Shishkina, I. V.; Stromskaya, E. G.; Nechayeva, S. A.

TITLE: Mercerization of undried cellulose

SOURCE: Bumazhnaya promyshlennost', no. 7, 1965, 9-10

TOPIC TAGS: mercerization, cellulose, paper industry

ABSTRACT: The effect of temperature, mercerization time, and concentration of caustic soda on the composition of undried alkaline cellulose (70% moisture content) was studied. The mercerization was carried out in 40 min with an 18% NaOH solution, and the amount of NaOH present in the alkali cellulose was determined. It was found that under the same conditions, the amount of alkali fixed by the undried cellulose is somewhat greater than the amount bound by dried cellulose (with a 7% moisture content). The reactivity of undried cellulose is higher than that of dried cellulose during the NaOH treatment. It is postulated that this high reactivity is due to the greater specific surface of undried cellulose, and hence to a greater accessibility of the hydroxyl groups which take part in the reaction.

Orig. art. has: 3 figures and 1 table.

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L 64384-65

ACCESSION NR: AP5019484

ASSOCIATION: Sibirskiy tekhnologicheskii institut (Siberian Technological Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: OC, CC

NO REF SOV: 000

OTHER: 000

llc
Card 2/2

SOV/180-59-3-15/43

AUTHORS: Al'tman, M.B., Slotin, V.I., Stromskaya, N.P. and Eskin, G.I., (Moscow)

TITLE: Change in the Structure and Properties of Aluminium and its Alloys Produced by Ultrasonic Treatment

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 3, pp 88-91 (USSR)

ABSTRACT: An ultrasonic vibrator UZG-10 was used together with a magnetostriction transducer PMS-9. Alloys tested were A-00 (pure Al), Al-9 (Al-Si-Mg) and high strength Al-20 (Al-Si-Cu-Mg). They were subjected to ultrasound of up to $6-7 \text{ W/cm}^2$ intensity and 19-20 kc/s frequency. Fig 1 shows photographs of macrostructures of A-00 and Al-20 before and after ultrasonic treatment. Microstructures are given in Fig 2 and here the differences are less noticeable. Mechanical properties, density and Ti content are given in the table. This shows that ultrasonic vibrations are very effective in degassing aluminium melts giving ingots of higher density. Mechanical properties are also improved by ultrasonic vibrations eg the tensile strength of Al-9 is increased from 18.8 to 20.2 kg/mm²; density and the yield point are also increased. Similar increases are observed for

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SOV/180-59-3-15/43

Change in the Structure and Properties of Aluminium and its Alloys
Produced by Ultrasonic Treatment

other alloys. Ultrasonics were introduced through metal waveguides which were immersed in molten (720-730°C) aluminium. The waveguides were gradually corroded by cavitation and diffusion into molten aluminium. This corrosion effect can be used to introduce refractory materials such as Ti, V, Zr into aluminium and its alloys by using Ti, V, Zr etc as waveguide material. Fig 5 shows the time rate of increase of the Ti content in A-0-0, AL-20 and AL-9 when a Ti waveguide was used. The results obtained are confirmed by X-ray analysis (Fig 3) which showed that ultrasonic vibrations caused grain refinement and polygonisation. There are 5 figures, 1 table and 3 references, 1 of which is English and 2 Soviet.

SUBMITTED: March 4. 1959

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S/724/61/000/000/007/020

AUTHORS: Lotareva, O. B., Stromskaya, N. P., Loktionova, L. I.

TITLE: The influence of natural and artificially accelerated aging on the mechanical properties of parts and specimens made of AA8 (AL8) alloy.

SOURCE: Liteynyye alyuminyevyye splavy; svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander and M. B. Al'tman. Moscow, Oborongiz, 1961, 66-69.

TEXT: This paper reports experimental laboratory tests which were designed to obtain the highest possible strength and elongation characteristics in AL8 alloy following a quench intended to transfer and fix the Mg_5Al_8 phase, little soluble at room temperature (T), into the solid solution (SS) of the alloy. The resulting supersaturated SS, in the Al-Mg system of the alloy, is metastable and, therefore, tends to revert to its stable state. The specific objective of the present investigation is a determination of the effect of the Zn in an AL8 alloy on the mechanical properties of the alloy after natural and artificially accelerated aging. The natural aging was studied on AL8 parts quenched under production conditions and stored at room T. The longest storage time was 40 months. The variation of the mechanical properties of the parts is graphed versus storage time. The tests show that the natural aging of the AL8 alloy following quench increases the tensile strength and the

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The influence of natural and artificially accelerated... S/724/61/000/000/007/020

elongation, especially during the initial aging period (up to 15 months). The properties of parts aged up to 40 months remain better than those of parts that were not subjected to natural aging. Artificially accelerated aging was performed on AL8 alloy and on an alloy containing 11% Mg, 0.8% Zn, 0.15% Be, 0.20% Ti, the remainder Al. Three-hr aging was performed at 100, 115, 125, 150, 175, 200, 250, and 300°C. Tabulated test data show that artificially accelerated 3-hr aging at 100° and room-T storage for 8 months improves the mechanical properties of the AL8 alloy to a significantly higher value than those obtained immediately after quench. The general level of the mechanical properties of the alloy of the Al-Mg-Zn system with Be and Ti is significantly higher than that of the AL8 alloy. Artificially accelerated aging at 100, 125, and 150° (3 hrs in each instance), followed by 1.5 yrs room-T storage, affords retention of the elongation of the quenched Al-Mg-Zn alloy at a level 50-60% of the initial value of that characteristic following quench, whereas naturally aged alloy, after 1.5 yrs, exhibits a reduction in the elongation to appx. one-third that value. There are 1 figure, 2 tables, and 1 Russian-language Soviet reference. The participation of G. K. Karelov in the work is acknowledged.

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S/724/61/000/000/016/020

AUTHORS: Al'tman, M. B., Slotin, B. I., Stromskaya, N. P., Eskin, G. I.,
Loktionova, L. I.

TITLE: The degassing of Aluminum and its alloys by ultrasonic vibrations.

SOURCE: Liteynnye alyuminiyevyye splavi; svoystva, tekhnologiya plavki, lit'ya
i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander
and M. B. Al'tman. Moscow, Oborongiz, 1961, 134-143.

TEXT: The paper describes an experimental investigation which deals with the
use of ultrasonic (US) vibrations in the degassing of Al and its alloys. A brief
state-of-the-art survey is presented. The equipment involved comprising a magne-
tostrictive transformer, a concentrator, a wave-guide, and a crucible containing
the melt are shown in a cross-sectional diagram. The metals tested by means of
US vibrations comprised pure Al of grade A00, a medium-strength alloy with good
casting properties, namely AA9 (AL9), an Al-Si-Mg alloy, and a high-strength
cast alloy, AA20 (AL20), an Al-Si-Cu-Mg alloy. Following the US treatment, the
alloys were cast in sand molds, and tensile specimens 10-mm diam and various
practical parts were cast. The parts were subjected to X-ray transillumination
and hydraulic tests under a 10-at pressure. An empirical gas-content scale was

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The degassing of Aluminum and its alloys ...

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adopted based on the segregation of gas bubbles at the moment of crystallization under vacuum, ranging from 5 points for intensive segregation of gas along the specimen surface to 1 point for crystallization without any visible segregation of gas. In addition, the vacuum specimens were cut in two, and the macrostructure of the sections was inspected after etching with a 10% solution of NaOH. The US treatment of the Al and its alloys was found to be an effective method for degassing. US treatment of an alloy prior to pouring into a mold increases the density and improves the mechanical properties of the castings. The properties are summarized in a full-page table. It was found that during US treatment of an alloy the alloy becomes saturated with the material of certain vibrators (for example, Mo) as a result of their dispersion under the action of the elastic vibration and of the temperature. It is suggested that this phenomenon may be usefully employed to produce intentional inoculation and alloying of the alloys. It is established that Nb is the most stable material for wave-guides, so that it may be recommended for the making of wave-guides from which no inoculation is to occur. There are 4 figures, 2 tables, and 5 references (2 Russian-language Soviet and 3 German-language). Thanks are expressed to the late G.M. Rovenskiy and to G.V. Zhevakina for the performance of the X-ray investigation.

Card 2/2

S/724/61/000/000/017/020

AUTHORS: Al'tman, M. B., Stromskaya, N. P., Baykova, L. T., Korol'kova, L. M.

TITLE: The refining of cast Al alloys with trichloride of Boron.

SOURCE: Liteynnye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander and M. B. Al'tman. Moscow, Oborongiz, 1961, 144-149.

TEXT: The paper describes an experimental investigation of the refining of cast Al alloys by means of BCl_3 for the purpose of eliminating gaseous and solid nonmetallic inclusions comprising primarily H and oxides of Al and of other metals participating in an Al alloy. The investigation endeavors to obviate the shortcoming of ZnCl_2 , MnCl_2 , and AlCl_3 , heretofore employed for this purpose, namely, the introduction by them of quantities of water which, as is known, constitutes the primary source of gaseous porosity of Al alloys. BCl_3 with its low temperature of vaporization (18°C) appeared to be suitable. The Al alloys tested comprised the Al-Si system (alloy AL4), the Al-Cu system (alloys AL10-V and AL1), and the Al-Mg system (alloy AL8). The refining procedure of each of these alloys is described in detail. In summary, the BCl_3 refining of the four alloys produced a favorable effect on the density and the mechanical properties of the castings (tensile strength,

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The refining of cast Al alloys with trichloride.... S/724/61/000/000/017/020

elongation, and H_B summarized in half-page table). Parts cast out of AL4, AL10-V, and AL8 alloys refined by means of BCl_3 exceeded ordinary parts by 1 to 2 scale grades in porosity; parts with a rough weight of 80 kg cast out of AL1 alloy refined with BCl_3 were equivalent in density and mechanical properties to similar castings cast in autoclave. The method of BCl_3 refining is recommended for the improvement of castings of alloys AL4, AL10V, AL1, and AL8 and, in some instances, to replace the casting of parts in the autoclave requiring a density of 2 to 3 on the conventional scale. There are 2 figures and 1 table; no references.

Card 2/2

STROMSKAYA, N.P.; SMIRNOVA, T.I.; KLIMOVA, V.A.; LOKTIONOVA, L.I.;
SYROMYATNIKOVA, M.A.; AL'TMAN, M.B., rukovoditel' raboty.

Effect of metal inclusions on the properties of aluminum
foundry alloys. Alium. splavy no.1:55-72 '63. (MIRA 16:11)

ZAL'NOVA, N.S.; ZHUTNITSKAYA, E.A.; STROMSKAYA, T.F.; KEL'METOVA, A.A.

Treatment of necatoriasis with naphthamon (alcopar). Med.paraz.
i paraz.bol. no.5:515-518 '61. (MIRA 14:10)

1. Iz klinicheskogo otdela Instituta meditsinskoy parazitologii i
tropicheskoy meditsiny imeni Ye.I. Martsinovskogo (dir. instituta -
prof. P.G. Sergiyev, zav. otdelom - prof. N.N. Plotnikov), sanitarno-
epidemiologicheskoystantsii Moskvy (glavnyy vrach M.S. Sokolovskiy)
i polikliniki No.25 Moskovskogo gorodskogo otdela zdravookhraneniya
(glavnyy vrach N.T. Sidorchuk).

(WORMS, INTESTINAL AND PARASITIC) (AMMONIUM COMPOUNDS)

MITNITSKAYA, E.A.; SEMENKOVA, T.F.; KURKOVA, G.A.

Clinical aspects and treatment of trichostemoniasis patients.
Med. paraz. i paraz. bol. 33 no.4:115-119 1974.

(MIRA 1813)

1. Klinicheskiy otdel Instituta meditsinskoy parazitologii i
tropical'noy meditsiny imeni Ye.I. Martynovskogo, Samitarnaya, i
miologicheskaya stantsiya Moskvy i uchastkovaya laboratoriya imeni
Malokova D'yakovskogo rayona Moskovskoy oblasti.

1. KLINICHESKIY OTDEL INSTITUTA MEDITSINSKOY PARAZITOLOGII I
TROPICHESKOY MEDITSINY IMENI YE.I. MARTINOVSKOGO I OTDEL
PARAZITOLOGII SANITARNO-EPIDEMIOLOGICHESKOY STANTSII MOSKVI.

Treatment of fascioliasis in man with chloxyle (hexachloroparazylene).
Med. parazit. i paraz. bol. 34 no.6:725-729 M-D '65. (MIRA 18.12)

1. Klinicheskiy otдел Instituta meditsinskoy parazitologii i
tropicheskoy meditsiny imeni Ye.I. Martynovskogo i otдел
parazitologii sanitarno-epidemiologicheskoy stantsii Moskvyy.
Submitted June 16, 1965.

STRONSKAYA, YE. F., Physician

"Study of the Fatigability of School Children After Angina and Catarrh of Upper Respiratory Tract." Thesis for degree of Cand Medical Sci. Sub 14 Dec 50, Sci Res Inst of Physical Education and School Hygiene, Acad of Pedagogical Sci USSR.

Summary 71, 4 Sep 52. Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

D'YACHKOVA, N.O., STROMSKAYA, Ye.P.

"Protection of school children's health under rural conditions"
by A.G. Popovich. Gig. i san. 23 no.6:89-90 My-Je '58 (MIRA 11:7)
(CHILDREN--CARE AND HYGIENE)
(POPOVICH, A.G.)

[illegible]

STROMSKAYA, Ye.P.

Organization of prolonged sleep in a sanatorium school for
children with neurotic states. Trudy 1-go MMI 5:197-206
'59. (MIRA 13:8)

1. Iz kafedry shkol'noy gigiyeny (zav. - dotsent M.D. Bol'-
shakova) 1-go Moskovskogo ordena Lenina meditsinskogo instituta
im. I.M. Sechenova.
(SLEEP--THERAPEUTIC USE) (NERVOUS SYSTEM--DISEASES)

KARDASHENKO, V.N.; STROMSKAYA, Ye.P.; GROMOVA, Z.P.

"Hygiene of school lessons" by S.M.Grombakh. Reviewed by V.N.
Kardashenko and others. Gig, i san. 25 no.8:117-118 Ag '60.

(MIRA 13:11)

(SCHOOL HYGIENE)

(GROMBAKH, S.M.)

BOL'SHAKOVA, M.D.; KARDASHENKO, V.N.; KONDAKOVA-VARLAMOVA, L.P.; STROMSKAYA,
Ye.P. (Moskva)

Physical development of children in the city of Orel (1943-1959).
Sov.zdrav. 20 no.5:9-13 '61. (MIRA L:5)
(OREL--CHILDREN--GROWTH)

LONSKIY, Ye.D.; STROMSKIY, P.P.; BOBKOV, M.M.

Highly productive equipment for pneumatic flux feeding. Elek.1
topl.tiaga 3 no.6:10-11 Je '59. (MIRA 12:9)
(Car wheels--Welding) (Pneumatic machinery)

STROMSKIY, P.P., kand. tekhn. nauk

Effect of wind on the train resistance. Vest. TSNII MPS 18
no.7:24-28 N '59. (MIRA 13:2)
(Air resistance) (Railroads--Trains)

ASTAKHOV, P.N., kand.tekhn.nauk; STROMSKIY, P.P., kand.tekhn.nauk

Eliminate unproductive spending of fuel and electric power.
Elek.i tepl.tiaga 5 no.11:26 N '61. (MIRA 14:11)

(Railroads--Brakes)

(Railroads--Cost of operation)

STROMSKIY, P.P., kand.tekhn.nauk

Effect of the internal friction of the track on the resistance
to motion of wheels on the rail. Vest. TSNII MPS 20 no.6:25-27
'61. (MIRA 14:10)

(Railroads--Rails)

ASTAKHOV, P.N., kand.tekhn.nauk; STROMSKIY, P.P., kand.tekhn.nauk

Analyzing the basic resistance to motion of the rolling stock on
an experimental track circle. Vest.TSNII MPS 21 no.2:27-29
'62. (MIRA 15:4)

(Railroad engineering)

STROMSKIY, P.P., kand.tekhn.nauk

Determining the coefficient of car resistance to air. Vest. TSNII MPS
22 no.2:21-24 '63. (MIRA 16:4)
(Air resistance) (Railroads--Cars)

MEYERSON, N.A., doktor tekhn. nauk; GUREVICH, A.M., kand. tekhn. nauk;
YEGOROV, P.M., kand. tekhn. nauk; POPOV, G.V., kand. tekhn. nauk;
SIBIRSKIIY, P.P., kand. tekhn. nauk

Results of traction and heat engine tests of series TG102 diesel
locomotives. Vest. TSNII MChS no.1:16-23 '66.

(MIRA 19:2)

СТРОВА, И. С.

"The Foxtail Millet Crop." Cand Agr Sci, Khar'kov Agricultural Inst,
Khar'kov, 1953. (RZhEic1, No 7, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SC: Sum. No. 556, 24 Jun 55

STRONA, I. G.

USSR/Agriculture - Grain

Card 1/1 : Pub.. 77, 19/26

Authors : Strona, I. G., Cand. Agri. Sci.

Title : Foxtail millet

Periodical : Nauka i zhizn' 21/7, 37 - 38, July 1954

Abstract : The efforts of the Government to increase the production of foxtail millet are recounted. The scientific institutes have taken up research to produce better varieties and these are listed and described. Illustrations.

Institution : ...

Submitted : ...

USSR / General Biology. Genetics. Plant Genetics.

B

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 14430

Author : Strona, I. G.

Inst : Ukrainian Scientific-Research Institute of
Plant Growing, Selection and Genetics

Title : The Study of Reciprocal Buckwheat Inter-
variety Hybrids

Orig Pub : Byul. Ukr. n.-1. in-ta rasteniyevodstva,
selekts. i genet., 1958, No 2, 65-67

Abstract : Until the present it was assumed that the
yield of buckwheat obtained by hybridization
is inherited according to mother types and
therefore it was recommended to use the best
variety of the region as the mother form for
production of buckwheat and as the father
form a mixture of pollens consisting of 4-5

Card 1/2

USSR / General Biology. Genetics. Plant Genetics.

B

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 14430

varieties of good buckwheat of other regions. At the Ukrainian Plant Growing Institute 168 combinations of hybridized buckwheat were found. A predominance of the mother's heredity, according to the complex of indices was observed in 56, of the father's heredity in 58, and of intermediate heredity in 72 combinations. The author draws the conclusion that a pollination by a mixture of 4-5 buckwheat varieties is not advisable and that father forms must be very carefully selected and only then may they be used as pollinizers when their effectiveness has been established. -- S. Ya. Krayevoy

Card 2/2

45

STRONA, I.G. [Strona, I.H.]

Effect of short days on the photophase in foxtail millet. Trudy
Inst. gen. i sel. AN URSR 5:93-4 '58. (MIRA 11:9)
(Millet) (Photoperiodism)

VLASYUK, P.A., akademik, otv.red.; YUR'YEV, V.Ya., akademik, zam. otv.
red.; BUZANOV, I.F., akademik, red.; DANILENKO, I.A., red.;
DELONE, L.N., doktor biolog.nauk, red.; KUCHUMOV, P.V., doktor
sel'skokhoz.nauk, red.; POLYAKOV, I.M., red.; STRONA, I.G.,
kand.sel'skokhoz.nauk, red.; TKACHENKO, P.A., kand.sel'skokhoz.
nauk, red.; CHIZHENKO, I.A., kand.ekonom.nauk, red.; LESOVICHENKO,
Yu.V., red.; MANOYLO, Z.T., tekhn.red.

[Vegetables and potatoes; works of scientific session, No.2]
Ovoshchnye kul'tury i kartofel'; trudy nauchnoi sessii, vypusk 2.
Kiev, Izd-vo Ukrainskoi Akad.sel'khoz.nauk, 1960. 132 p.

(MIRA 14:1)

1. Ukrainskiy ordena Lenina nauchno-issledovatel'skiy institut
rasteniyevodstva, seleksii i genetiki. 2. Chlen-korrespondent
Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina
(for Danilenko). 3. Chlen-korrespondent AN USSR (for Strona).
(Vegetable gardening) (Potatoes)

VLASYUK, P.A., akademik, otv.red.; YUR'YEV, V.Ya., akademik, zam.otv.red.;
 BUZANOV, I.F., akademik, red.; DANILENKO, I.A., red.; DELONE,
 L.N., doktor biolog.nauk, red.; KUCHUMOV, P.V., doktor sel'skokhoz.
 nauk, red.; POLYAKOV, I.M., red.; STRONA, I.G., kand.sel'skokhoz.
 nauk, red.; TKACHENKO, P.A., kand.sel'skokhoz.nauk, red.;
 CHIZHENKO, I.A., kand.ekonom.nauk, red.; BLANINA, L.F., red.;
 VIDONYAK, A.P., khud.-tekhn.red.

[Problems in improving the quality of agricultural products; pro-
 ceedings of the scientific session] Voprosy uluchsheniia kn-
 chestva sel'skokhoziaistvennoi produktsii; trudy nauchnoi sessii.
 Kiev, Izd-vo Ukrainskoi Akad.sel'khoz.nauk. No.4. [Feeds and
 livestock products] Korma i produkty zhivotnovodstva. 1960. 143 p.
 (MIRA 14:1)

1. Ukrainskiy ordena Lenina nauchno-issledovatel'skiy institut
 rasteniyevodstva, selektsii i genetiki. 2. Chlen-korrespondent Vse-
 soyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina i
 Ukrainskoy akademii sel'skokhozyaystvennykh nauk; Nauchno-issledo-
 vatel'skiy institut zhivotnovodstva Lesostepi i Poles'ya USSR (for
 Danilenko). 3. Chlen-korrespondent AN USSR (for Polyakov).
4. Ukrainskiy ordena Lenina nauchno-issledovatel'skiy institut raste-
 niyevodstva, selektsii i genetiki (for Strona).
 (Feeds) (Stock and stockbreeding)

* YUR'YEV, V.Ya., otv. red. [deceased]; STRONA, I.G., kand. sel'khoz. nauk, zam. otv. red.; VOL'F, V.G., red.; POLYAKOV, I.M., red.; LAPTSEVICH, G.P., red.; KIREYEV, F.N., red.; POKID'KO, A.I., red.; POTOTSKAYA, L.A., tekhn. red.

[Scientific problems in seed production, the study and the inspection of seeds] Nauchnye voprosy semenovodstva, semenovedeniya i kontrol'no-semennogo dela; sbornik materialov. Kiev, Izd-vo Ukr. akad. sel'khoz. nauk, 1962. 203 p. (MIRA 16:5)

1. Soveshchaniye po organizatsii nauchno-issledovatel'skoy raboty v oblasti semenovodstva, semenovedeniya i kontrol'no-semennogo dela. Kharkov, 1961. 2. Ukrainskiy nauchno-issledovatel'skiy institut rasteniyevodstva, selektsii i genetiki (for Strona).

(Seed industry)

KURINAI'OV, A.L., akademik, otv. red.; OVCHINOV, A.Ye., doktor biol. nauk, red.; GENEKEL', I.A., prof., red.; IOLYANOV, I.N., prof., red.; PROKOPIYEV, A.A., prof., red.; STROGA, I.G., kand. sel'khoz. nauk, red.; SEDENKO, D.M., red.; GENEKEL', K.P., red.; KHOR'KOV, Ye.I., red.

[Biological bases of increasing the quality of farm crop seeds; materials of a scientific session held November 26-30, 1963 in Moscow] Biologicheskie osnovy povysheniya kachestva semian sel'skokhoziaistvennykh rastenii; materialy nauchnoi sessii, sostoiavsheisia 26-30 noiabria 1963 g. v Moskve. Moskva, Nauka, 1964. 278 p. (MIRA 18:3)

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2470. INSERTION OF PINS AS A THERAPEUTIC METHOD IN FRACTURES OF
THE MANDIBLE - Grotowanie jako metoda leczenia złamań zuchwy -
Strona M. Odd. Chir. Stomatol. A. M., Kraków - CZAS. STOMAT. 1958,
11/2 (107-113) Tables 3

On the basis of 53 cases the use of external fixation is recommended in particular
in cases of fractures in the region of the angle and branch of the mandible. (IX, 19)

1. 11. 11. 11.

2. negative resistance network. (1941-1942) (1941-1942)

3. Odessa, Ukraine (1941-1942)